



357040

Telephone Memorandum

Project No.: 41300 Client: _____ Date: 5/19/94
Subject: Illinois Cleanup Requirements

Your Name: J. Duthela Outside Party: Mark Crites
Illinois EPA 217/782-6761

Made Call (☒)

Rec'd Call (☐)

Comments	Summary of Conversation:
Illinois doesn't accept PRG's for soils unless supported with a risk assessment	Mark will send me Ill. Ground Water Quality Standards (Title 35, Part 620) covering 4 classes of aquifer. Potable water aquifers are the most protected class; criteria are MCL's or close MCL's for the many chemicals specifically named. Appendix has formulae based on health criteria for chemicals not listed. He'll also send LUST site requirements (ostensibly covering BTEX, PNTs, lead).
Under Phase III cleanups use "common sense"; these cleanups are usually not reported to the state.	There is no body of state regs like our 307. For soils generally, the ground water criteria* are the default criteria. TCLP results are typically compared directly to GW criteria. The above is the Ill approach to RCRA & CERCLA sites.
*metals only. Total organic concentrations are compared	For typical property-transfer sites we have 2 options: (1) voluntary cleanup to limits that satisfy lender, or (2) pre-notice Ate program involving state directly, re with state signoff provision (you pay for the time the state reviewer spends on your project). The prenotice program Coordinator is Bob O'Hara, 782/762
CC: to GW Criteria	

ILLINOIS EPA

(Bureaus)

AIR

LAND

WATER

(Divisions)

(Div. head vacancy)

LAND
POLLUTION
CONTROL

(All Solid
Waste Programs)

(Sections)

REMEDIAL
MANAGEMENT

(CERCLA
State
Superfund [pre-notice
site program]
LUST)

(Sec. Head vacancy)

LAND

PERMITTING

(for solid & hazardous
waste)

(Branches)

Hazardous
Waste

Mark Crites, an
Environmental Protection
Engineer (title)

TABLE 1
SUMMARY OF PHASE II FIELD SAMPLING AND ANALYSIS
PROPOSED BY U.S. ARMY CORPS OF ENGINEERS
WISCONSIN STEEL WORKS SITE
(Page 1 of 2)

Task	Description	Number and Type of Sample	Analysis	Notes
1- Deep Well Installation	10 wells to bedrock (approx. 70 feet bgs)	3 samples/well and 16 QA/QC samples	VOC, PAH, Pesticides, PCBs, CN, Total/Hex. Cr, Pb, As, Cd, Hg, Ni, Se, Zn	Samples will be taken at the locations showing the highest field screening levels.
1- Shallow Well Installation	8 shallow sand wells (approx. 35 feet bgs)	2 samples/well and 10 QA/QC samples	Same as deep wells	Samples will be taken at the locations showing the highest field screening levels.
2- Well Sampling	Sample 23 existing and 18 new wells	41 field samples and 18 QA/QC samples	VOC, PAH, Pesticides, PCBs, Phenol, Cn, NH ₃ -N, Total/Hex Cr, Pb, As, Cd, Hg, Ni, Se, Zn, field parameters	All metals will be analyzed filtered and unfiltered
3- Hot Spot Sampling	Approximately 900 feet of continuous sampling (45 borings to 20 feet) 45 ground water samples (hydropunch) Possible soil gas analysis	95 soil samples 45 ground water samples No QA/QC samples	Analysis of soil samples vary by location, and may include analysis of PAHs, pesticides, PCBs, Pb, Cr, Cn, VOC, TPH, BTEX Ground water samples are to be analyzed for PAH, pesticides, PCBs, VOCs, Pb, Cr (total)	The exact location of these samples has not yet been determined
4- Background Sampling	Obtaining soil samples from nearby off-site locations at depths of 6 inches, 10 and 20 feet.	30 field samples and 14 QA/QC samples	VOC, PAH, Pesticides, PCBs, Phenol, Cn, NH ₃ -N, Total/Hex Cr, Pb, As, Cd, Hg, Ni, Se, Zn	Permission for sampling will be necessary
5- Conduit Sampling	21 sample locations in conduits, manholes, catch basins, etc.	29 water samples and 15 QA/QC samples 18 sediment samples and 9 QA/QC samples	VOC, PAH, Pesticides, PCBs, Phenol, Cn, Cr (total), Po, As, Cd, Hg, Ni, Se, Zn Water analysis will also include NH ₃ -N, Total/Hex Cr, Pb, As, Cd, Hg, Ni, Se, Zn	A seperate tracer study is also planned
6- River/Slip Sampling	Continuous sampling at 11 locations to 20 feet bgs.	33 field samples and 19 QA/QC samples	VOC, PAH, Pesticides, PCBs, Phenol, Cn, NH ₃ -N, Total/Hex Cr, Pb, As, Cd, Hg, Ni, Se, Zn	Samples are to be taken at the locations showing the highest field screening levels

TABLE 1
SUMMARY OF PHASE II FIELD SAMPLING AND ANALYSIS
PROPOSED BY U.S. ARMY CORPS OF ENGINEERS
WISCONSIN STEEL WORKS SITE
 (Page 2 of 2)

Task	Description	Number and Type of Sample	Analysis	Notes
7- TCLP Testing	Composite samples of slag and slag mixed with soil. Composite sample from precipitator building foundations and sludge lagoons	Each composite sample will be taken from 4 subsamples 3 for slag and 3 for slag and soil 1 foundation sample and 3 lagoon samples	TCLP metals for slag samples All TCLP parameters for foundation and lagoons	
8- Aquifer Testing	Installation of two 6-inch wells, subsequent pump tests	Water levels, drawdown curve	None	The Phase I included testing of the sand and till units, with limited data for the till unit

Key:

bgs = Below ground surface.
 QA/QC = Quality assurance/quality control.
 VOC = Volatile organic compound.
 PAH = Polynuclear aromatic hydrocarbon.
 PCB = Polychlorinated biphenyl.
 CN = Cyanide
 Total Hex Cr = Total hexavalent chromium
 Pb = Lead
 As = Arsenic
 Cd = Cadmium

Hg = Mercury
 Ni = Nickel
 Se = Selenium
 Zn = Zinc
 NH₃-N = Ammonia nitrogen
 TPH = Total petroleum hydrocarbons
 BTEX = Benzene, toluene, ethylene, xylene.
 TCLP = Total characteristic leaching procedure.

TABLE 2
SUMMARY OF HOT SPOT SAMPLING
WISCONSIN STEEL WORKS

Area ID	Area Description	Number of Samples in SOW	Number of Screening Samples Proposed by ERM ⁽¹⁾	PAH		Pesticides		PCBs		Pb/Cr		VOC		TPH		BTEX		CN	
				SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾	SOW ⁽²⁾	ERM ⁽³⁾
1a	Discarded tanks near SS-20	2	8 - 16	X				X		X					X				
2a	Steel Finishing Area, near SB-14, F-15	6	8 - 16	X	X	X		X		X		X			X				
2b	Steel Finishing Area near SB-10, S13-11	6	24 - 48		X	X		X		X	X								X
2c	Filled in Slip	12	16 - 32		X	X		X		X	X				X				
2d	Lagoons & South of Mill 6	12	16 - 32		X					X	X			X	X				
3a	Blast Furnace Area, near MW-16	4	16 - 32	X	X					X				X	X				
3b	Former Stripper building near SB-09	4	8 - 16		X	X		X	X	X									X
4	Steel Production Area	20	48 - 96	X	X	X		X		X	X	X	X		X				X
5	Coke Plant/Coal Storage Area	30	56 - 112	X	X	X		X	X	X	X		X		X	X		X	X
NA	Office Area	0	8 - 16								X								
NA	Ore Yard	0	8 - 16		X														
Total Number of Samples		96	216 - 432																

Notes

- (1) At least 8 samples will be obtained for screening from each sample origin. For estimating purposes, it is assumed that each 16 samples will be associated with each sample origin.
(2) This area specified for sampling in the SOW
(3) ERM suggests that sampling occur in or near the area designated in the SOW

SOW = Scope of Work for Phase II Sampling and Analysis, prepared by the US Army Corps of Engineers, February 1994.
PAH = Polynuclear aromatic hydrocarbons
Pb = Lead
Cr = Chromium

VOC = Volatile organic compounds
TPH = Total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene and xylene
CN = Cyanide

WISCONSIN STEEL

PHASE II RI

FIELD STUDIES

TASK 1 - Additional Wells

- * 9 Deep Wells (Rock Surface or into Rock?)
- * 7 Shallow (4 water table) *needs more*

TASK 2 - Sampling Wells

- * 23 existing, 16 new
- * One sampling event *- 2*
- * Parameters - Volatile Organics, PAH's, Pesticides/PCB's, Phenol, Cyanide, NH₃-N, Metals (Total, Hex Chrome, Lead, Arsenic, Cadmium, Mercury, Nickel, Selenium, Zinc, pH, Conductivity

TASK 3 - Hot Spot Demarcation and Sampling

- * General areas shown in Fig. 2-3 (p.2-13,2-14) and Table 2-7 (p.2-19) of SOW

TASK 4 - Background Soils (Optional)

- * 10 locations in parks, cemeteries, school yards, etc.
- * Same parameters as wells

TASK 5 - Sampling/Analyses of sediments, water from:

- * Conduits, manholes, outfalls, basins, and tracer studies
- * Same parameters as wells

TASK 6 - Deep Core Sampling from Calumet River and Slips

- * 11 core locations (Fig. 2-6, p.2-27, 2-28) (4 from slips, 7 from river)
- * Same parameters as wells

TASK 7 - Additional TCLP Testing

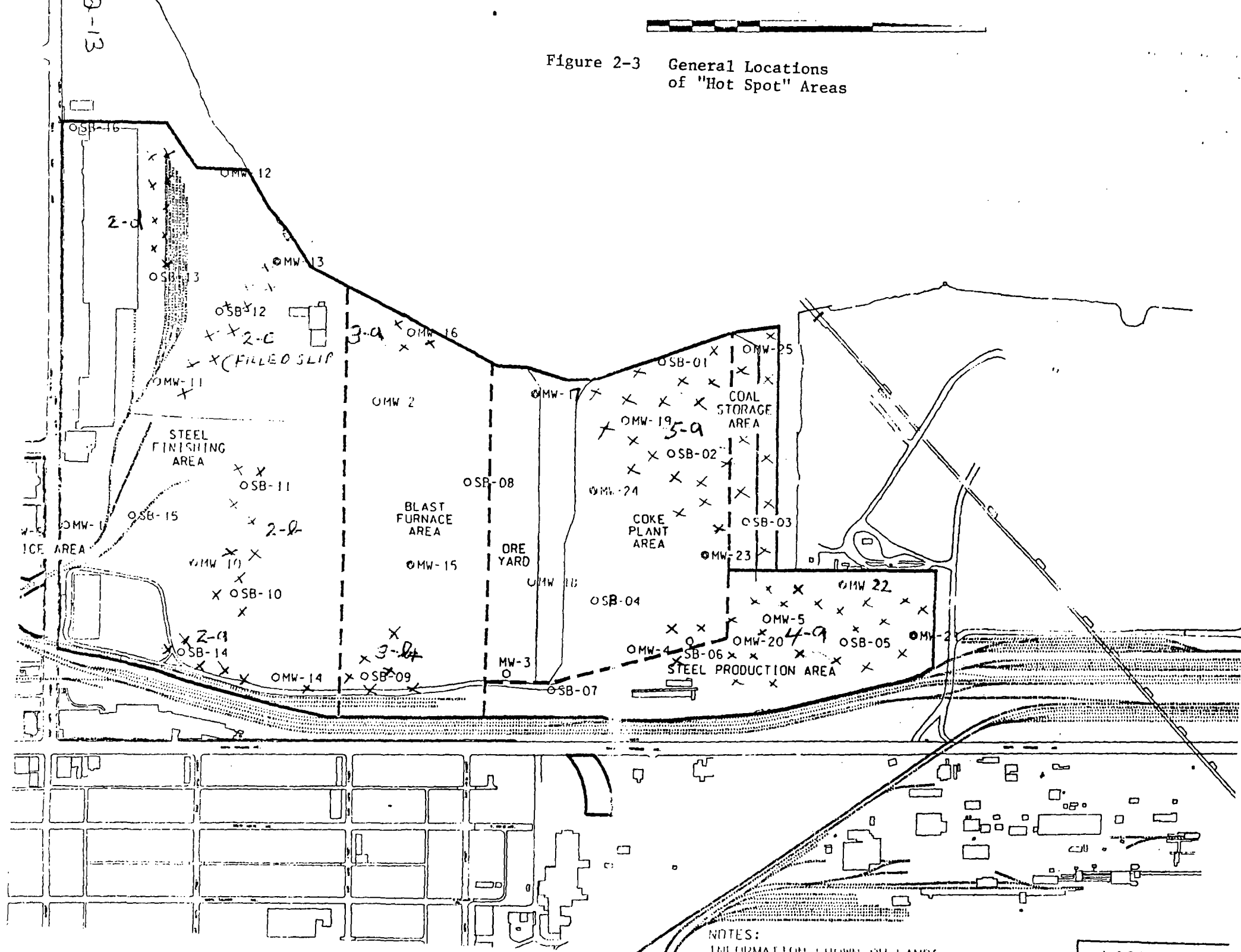
- * 3 slag)TCLP Metals Only
- * 3 weathered slag/soil
- * Lagoon sludges, precipitator sludge - all TCLP parameters

TASK 8 - Pump Tests

- * Slag area
- * Water Treatment Plant area

RISK ASSESSMENT

Figure 2-3 General Locations of "Hot Spot" Areas



NOTES:
INFORMATION SHOWN ON LANDS

WISCONSIN S

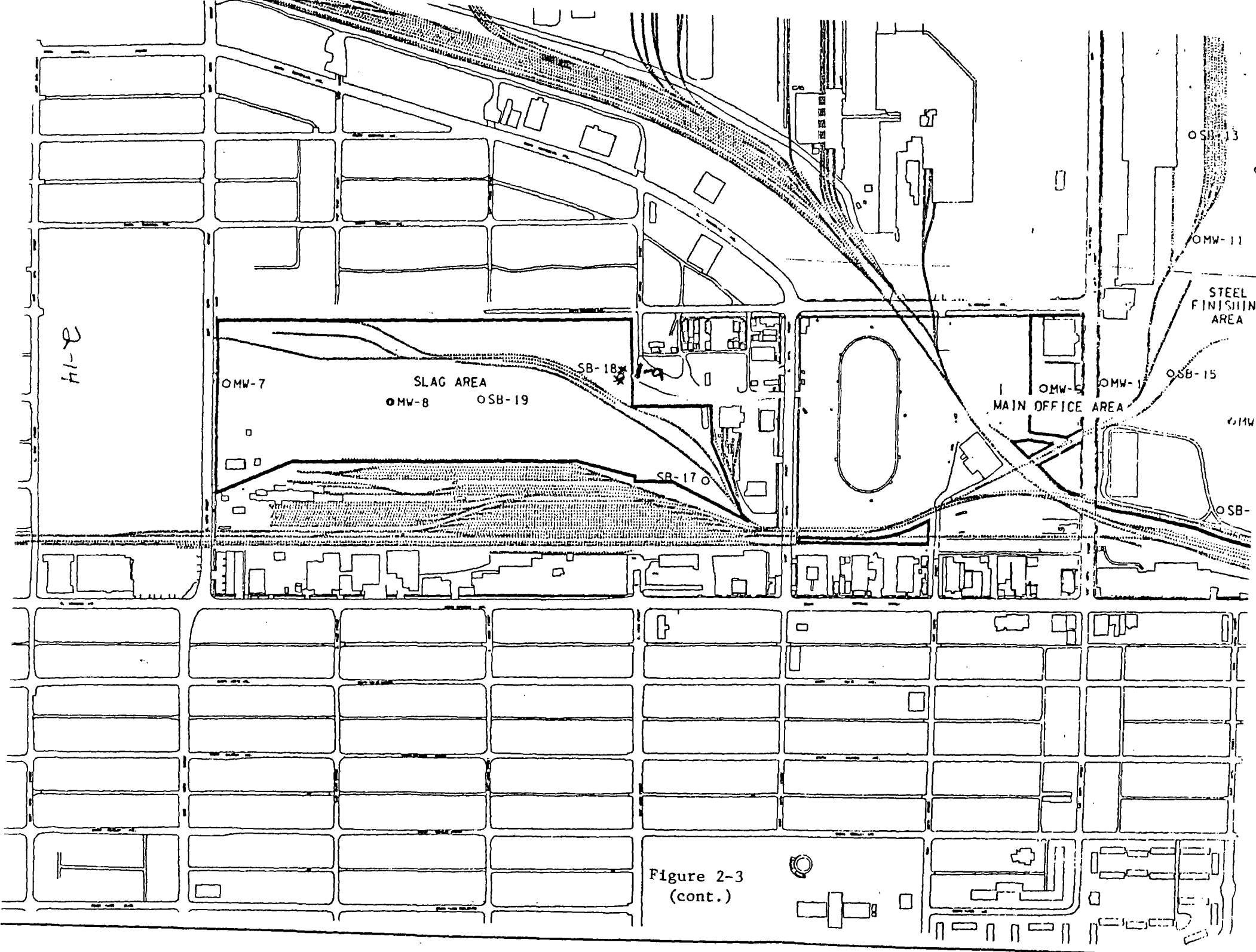


Figure 2-3
(cont.)

TABLE 2-7
POTENTIAL HOT SPOT SAMPLING AND DEMARCATION
ESTIMATED NUMBERS OF SAMPLES

1. Slag Area

1.a Discard tanks near SS-20

Parameters - PAH's, PCB's, lead, chromium
Estimated no. confirmatory lab samples - 2

2. Steel Finishing Area

2.a SB-14, F-15 (oil sheen observed during SB-14) boring PCB's detected, diesel fuel odor in ground water near F-15).

Parameters - PAH's pesticides/PCB's, volatile organics, lead, chromium.
Estimated no. confirmatory lab samples - 6

2.b SB-10, SB-11 (Pesticides, PCB's detected)

Parameters - Pesticides/PCB's, lead, chromium
Estimated no. confirmatory samples - 6

2.e Filled in slip (SB-12, High PAH's, PCB's, chromium, MW-13, elevated metals (pb, Cr, Zn) should determine boundaries and character of deep fill

Parameters - Pesticides/PCB's, lead, chromium
Estimated no. confirmatory lab samples - 12

2.d Lagoons & vicinity south of Mill #6 (SB-13, SS05, SS06, SS07 high lead, chromium, SS05, 06, 07 high TPH)

Parameters - Lead, chromium, TPH
Estimated no confirmatory lab samples - 12

3. Blast Furnace Area

3a. MW-16 (Deep Fill Layer 0-25', High PAH's, TPH)

Parameters - PAH's, TPH, lead, chromium
Est. No. confirmatory samples - 4

3b. SB-09 former stripper building (~ 15 Feet Fill, PCB's Detected, Pesticides Detected at 25-27', PID-250 ppm)

Parameters - PCB's/Pesticides, lead, chromium, volatile organics
Est. No. confirmatory lab samples - 4

TABLE 2-7
POTENTIAL HOT SPOT SAMPLING AND DEMARCATION
ESTIMATED NUMBERS OF SAMPLES
(continued)

4. Steel Production Area

4a. Basic oxygen furnace/precipitator/benzol building (fill/soils in this area have PCB/Pesticide (chlordan), PAH's, petroleum hydrocarbon contamination. MW-5 water has oily phase with BTEX, PAH's, solvents, pesticides, MW-20 water high BTEX)

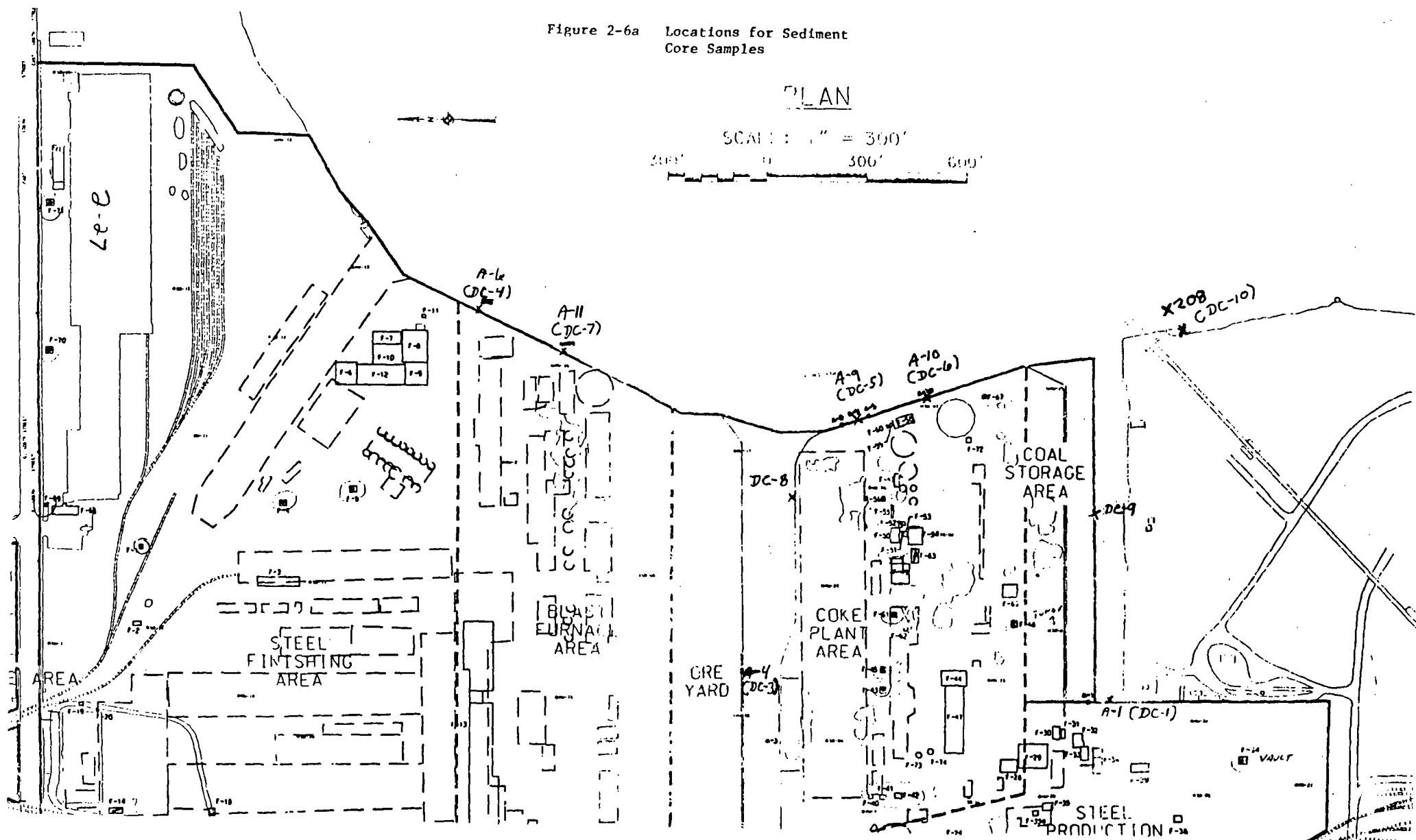
Parameters - PCB's/Pesticides, PAH's, volatile organics, lead, chromium
Est. No. confirmatory samples - 20

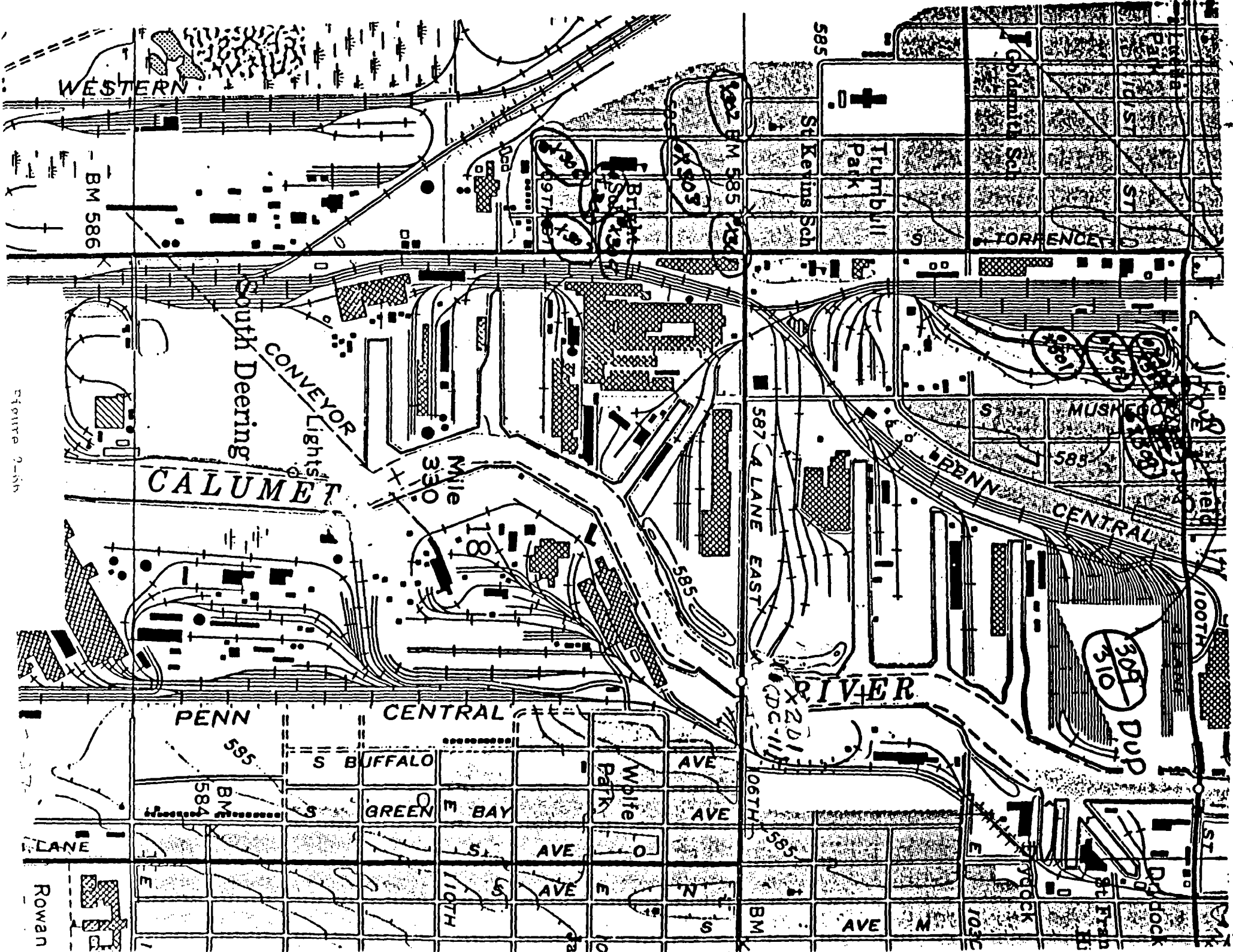
5.

5a. Coke Plant/Coal Storage Area (Fill and soils in these areas have high levels of PAH's, BTEX; metals; PCB's detected; oily sludge observed in SB-03; black discoloration and oil sheen in SB-02 TO 25'; visible oil contamination and highly elevated PAH's in fill and sand to 20+ feet at MW-19; SB-02 had elevated PAH's in sand at 11-13' with black discoloration and oil sheen to 25'; elevated PAH's and PCB's in MW-25 boring to 25'.) It is important that one or more samples be taken in the vicinity of the former gas holder.

Parameters PAH's, BTEX, PCB's/Pesticides, volatile organics, lead, chrome, cyanide
Est. No. confirmatory samples - 30

Figure 2-6a Locations for Sediment
Core Samples





5/6/94

WISCONSIN STEEL WORKS SITE
Chicago, Illinois

BUFFALO DISTRICT-EDA STRATEGY MEETING
FOR
THE PHASE II FIELD SAMPLING/ANALYSIS

PURPOSE: For discussion at the Technical Meeting on May 13, 1994, to resolve all comments to the Phase II Field Sampling/Analysis Scope of Work (SOW).

Buffalo's Evaluation of All Cmts Received
On The Phase II SOW

Discussion Items For 10 May 94	NAVISTAR	CORPS (NCB/MRD)	IEPA	USEPA
<u>1. ITEMS IN SOW</u>				
- Deep Wells	N/D	Y	Y	Y
- Pumping Tests	N/D	N/D	N	?
- Samplg CBS, MHs, Cond/Outfalls	N/D	Y	Y	?
- Tracer Study	N	Y	Y	Y
- Samplg Calumet, N & S Slips	N	Y	Y	Y
- TCLP	N	Y (exc. slag)	Y	?
- Risk Assessmnt	N	Y	?	?
- Background Soil	N	?	Y	Y
- Background Wells	N	Y (usgs)	Y	Y
<u>2. Ph III Requiremnt</u>	N*	N	N	N

[* - However, the Corps disagrees with NAVISTAR'S conclusion that if their comments are incorporated into the SOW there will be no additional data collection after Phase II. A Phase III would almost be a certainty since the items identified in their comments to be delayed in 1. above (N/D) are all essential to the completion of the Remedial Investigation (RI)].

<u>3. Overall Savings</u>	Y	N	?	?
<u>4. Delay in RI</u>	1 - 1 1/2 yrs.	Hold Schedule	?	?
<u>5. Cost Estimates (Ball Park \$ X 1000)</u>				

- NAVISTAR SOW	-	\$530	-	-
- CORPS SOW	-	750	-	-

D-Would Delay RI Report; N-Should be deleted from SOW;
Y-Should Stay in SOW; ?-Unknown Position or Unclear